ENHANCING PHOTOS

In Focus

Some photos are perfect when you take them. However, most could cope with just a little tweaking to make them even better. For example, many photos taken on a digital camera are darker than desired.

There are many ways in which you can modify photos and all of these are simple in Paint Shop Pro. However, the hardest task for you will be to determine what is wrong with the photos or to work out how you can improve them.

And once you have decided, it will simply be a case of trying things out – and there is a recommended plan of attack.

One thing to remember, though – always modify a ***copy*** of your original photos. That way, you can always toss away your changes and start again!

In this session you will:

-

FIXING RED EYES

How often have you taken a photo of a person, only to end up with a great shot but with red eyes? It looks ugly, doesn't it? Red eyes are caused when the portrait subject looks directly into the flash and their eyes reflect the light back from their retinas. This problem is not only confined to human subjects – you may also see the same eye problems when you photograph animals.

Try This Yourself:

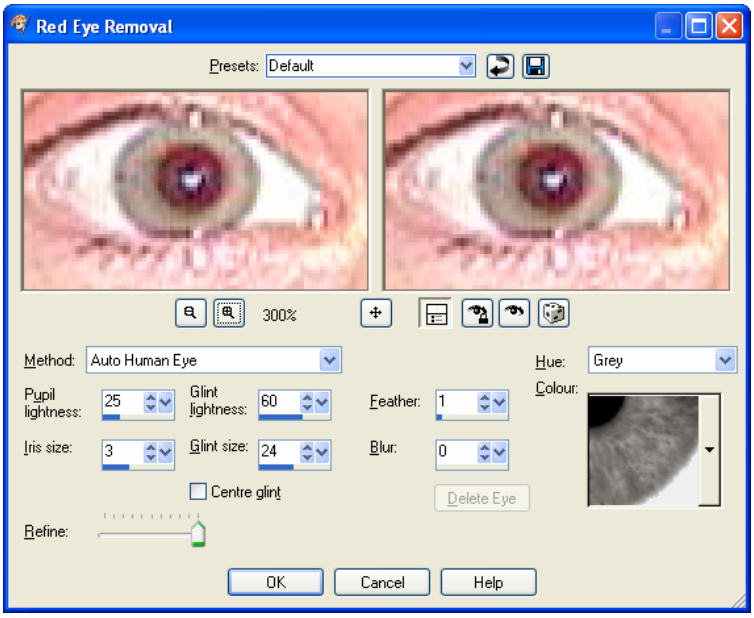
Open File — *Before starting this exercise you MUST open the file T003 Enhance_10.jpg...*

1. Select **Adjust** > **Photo Fix** > **Red Eye Removal** to display the ***Red Eye Removal*** window
2. Click on the ***Reset to Default*** tool, click on the ***Zoom In*** tool until the image is displayed at ***300%***, then click on the ***Navigate*** tool and pan to display the left eye
3. Ensure that ***Auto Human Eye*** is selected in ***Method***, then click on the red pupil in the left pane – notice that a selection circle has appeared and it's not very accurate

   Let's try a different method…
4. Click on **[Delete Eye]**, then click in the centre of the pupil in the left pane and drag out to the edge of the red pupil – that's better
5. Click on **[OK]** to correct the first eye
6. Repeat the previous steps to correct the second eye

   Note that you may need to reduce the Iris size if the eye in the preview pane does not look natural

2



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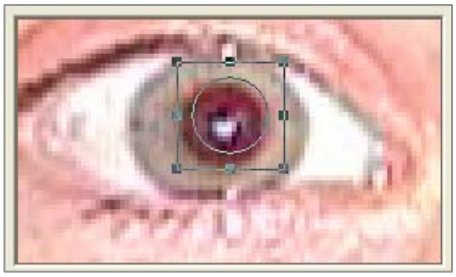

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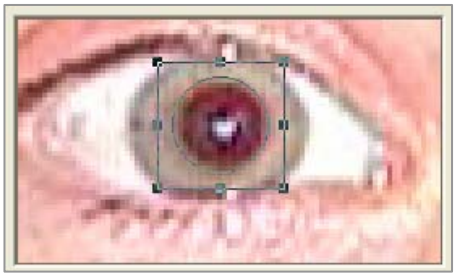


For Your Reference…

To ***remove red eyes***:

1. Select **Adjust** > **Photo Fix** > **Red Eye Removal**
2. Zoom and pan in on an eye, ensure that ***Auto Human Eye*** is selected, click and drag out to the edge of the red pupil, then click on **[OK]**

Handy to Know…

- You can also use this procedure for changing eye colour. To do this, display the ***Red Eye Removal*** window, zoom and pan in on the first eye, select the iris and pupil, click on the drop arrow for ***Hue***, select the desired colour, then click on **[OK]**. Repeat for the second eye.

SOFTENING PHOTOS

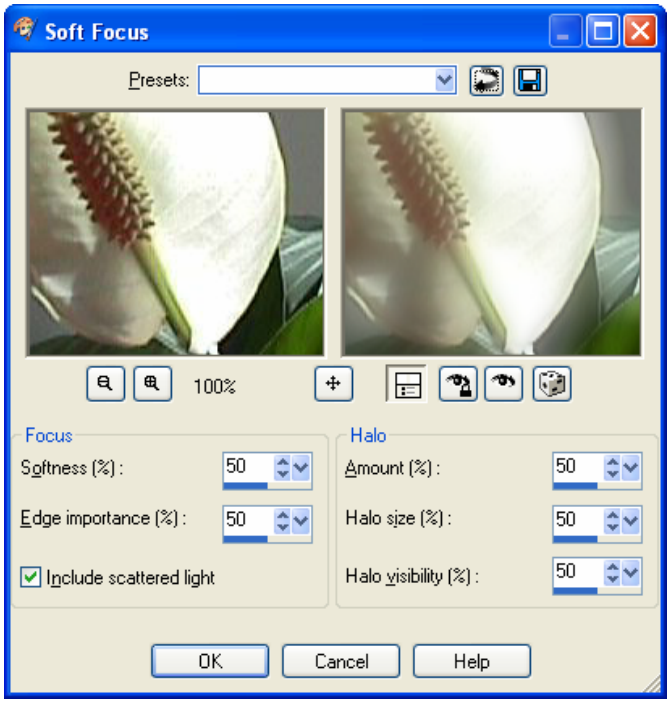
You can alter your digital photos so that they appear softer. Paint Shop Pro has several functions to do this. You can either use the ***Soften*** or the ***Soften More*** function to apply a uniform blur to the entire image. You can also use the ***Soft Focus*** feature to make an image look as if it has been taken with a camera with a soft focus filter.

Try This Yourself:

Open File *Before starting this exercise you MUST open the file T003 Enhance_9.jpg...*

1. Press Shift + D to duplicate the image, then select **Window** > **Tile Vertically** – this will allow us to compare the results
2. Ensure that you can see the flower in both images and that the duplicated image is active
3. Select **Adjust** > **Softness** > **Soften** – looking particularly at the flower, notice that it looks a bit fuzzy
4. Press Ctrl + Z to undo this change – now let's apply a soft focus to the image
5. Select **Adjust** > **Softness** > **Soft Focus** to display the ***Soft Focus*** window, then click on the ***Reset to Default*** tool
6. Click on **[OK]** to apply the default focus and halo effects to the image
7. Press Ctrl + Z to undo this change, then repeat the above steps to apply a soft focus, but this time alter the settings as shown in the ***Soft Focus*** window to see how they affect the image

5



7

Softness	*Enter a percentage value (1 – 100%), where a higher value results in a more blurred image.*
Edge importance	*Enter a percentage value (1 – 100%), where a higher value tends to retain the detail of the edges.*
Amount	*Enter a percentage value (1 – 100%), where a higher value displays the halo effect around brighter areas of the image, while a lower value displays the halo effect around only very bright parts of the image.*
Halo size	*Enter a percentage value (1 – 100%), where a higher value results in a larger halo effect.*
Halo visibility	*Enter a percentage value (1 – 100%), where a higher value results in a more distinct halo effect.*

For Your Reference…

To ***soften photos***:

1. Select **Adjust** > **Softness**
2. Select **Soften** to apply an all-over blur, or
   Select **Soften More** to apply a more intense all-over blur, or
   Select **Soft Focus** to apply a soft focus

Handy to Know…

- The **Soften More** feature applies the ***Soften*** command to the image, but with more intensity.

SHARPENING IMAGES

Paint Shop Pro's ***Clarify*** function allows you to make your images clearer and more focussed by adding a sense of depth to them. It can also make hazy and slightly out of focus images clearer. You can also use the ***Sharpen*** and ***Sharpen More*** features to increase the contrast of adjacent pixels where there is a significant contrast in colour.

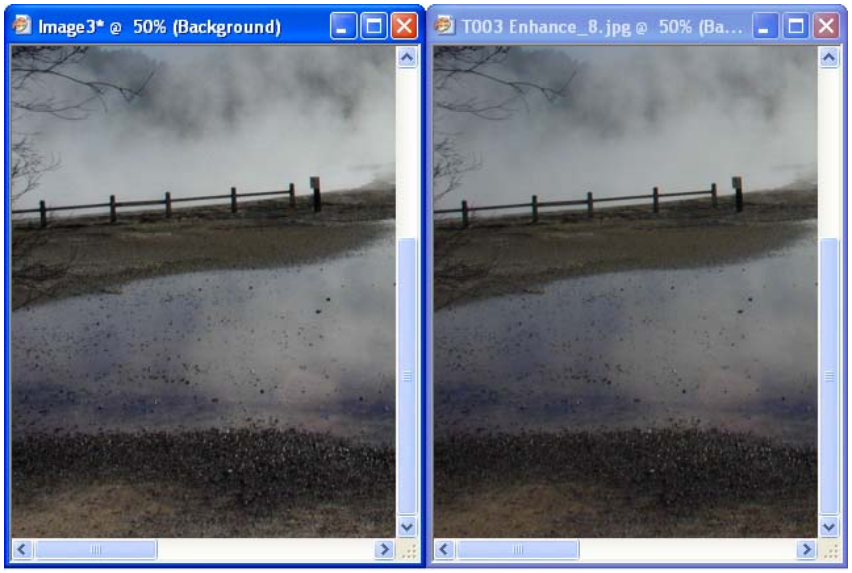
Try This Yourself:

Open File *Before starting this exercise you MUST open the file T003 Enhance_8.jpg...*

1. Press Shift + D to duplicate the image, then select **Window** > **Tile Vertically** – this will allow us to compare the results
2. Pan down both images to their bottom left corners, then ensure that the duplicated image is active
3. Select **Adjust** > **Brightness and Contrast** > **Clarify** to display the ***Clarify*** window
4. Increase ***Strength of effect*** to ***4*** then click on **[OK]** to apply the effect

   Notice that the pebbles, in particular, look clearer…
5. Select **Adjust** > **Sharpness** > **Sharpen**

   Notice that the pebbles and the rocks near both the fence and the edge of the lake, are noticeably more defined…
6. Close both images without saving any changes



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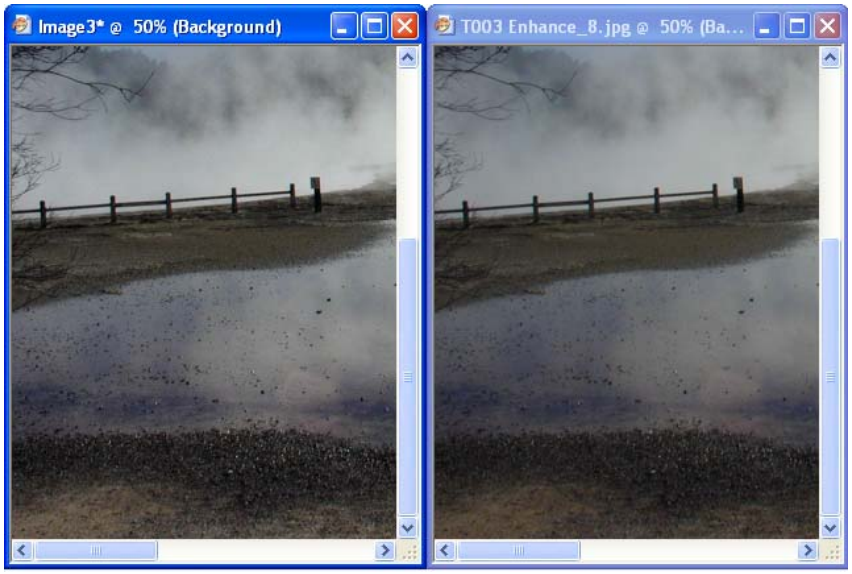


5

For Your Reference…

To ***clarify*** and ***sharpen images***:

1. Select **Adjust** > **Brightness and Contrast** > **Clarify**
2. Adjust the ***Strength of effect*** then click on **[OK]**
3. Select **Adjust** > **Sharpness** > **Sharpen**

Handy to Know…

- Paint Shop Pro's ***Sharpen More*** command works similarly to the ***Sharpen*** command, except that it sharpens with a stronger effect. To do this, select **Adjust** > **Sharpness** > **Sharpen More**. Be aware that the ***Sharpen More*** command will increase the graininess of the image.

REPAIRING SCRATCHED PHOTOS

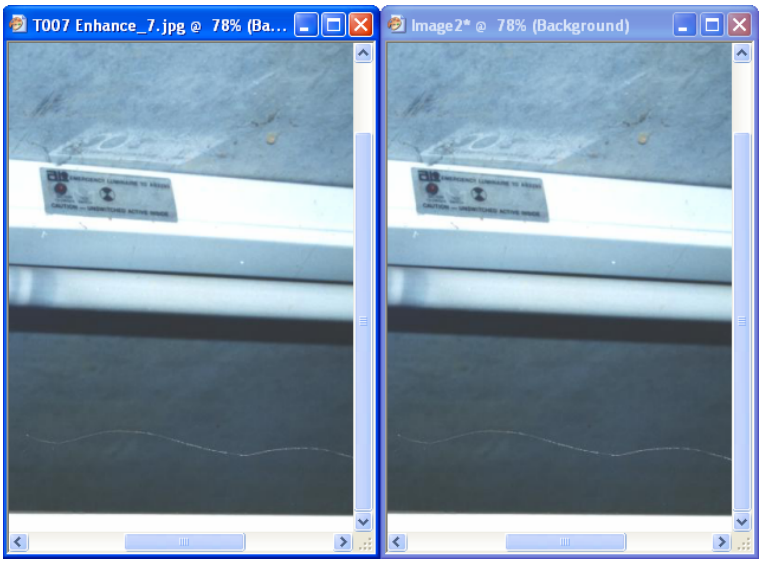
If you have photos that are perfect except for a scratch or two, don't throw them out. You can scan them and then digitally remove the scratches using either the ***Automatic Small Scratch Removal*** feature or manually using the ***Scratch Remover*** tool. The automatic feature finds and removes small, line-shaped defects that are either lighter or darker than the surrounding area.

Try This Yourself:

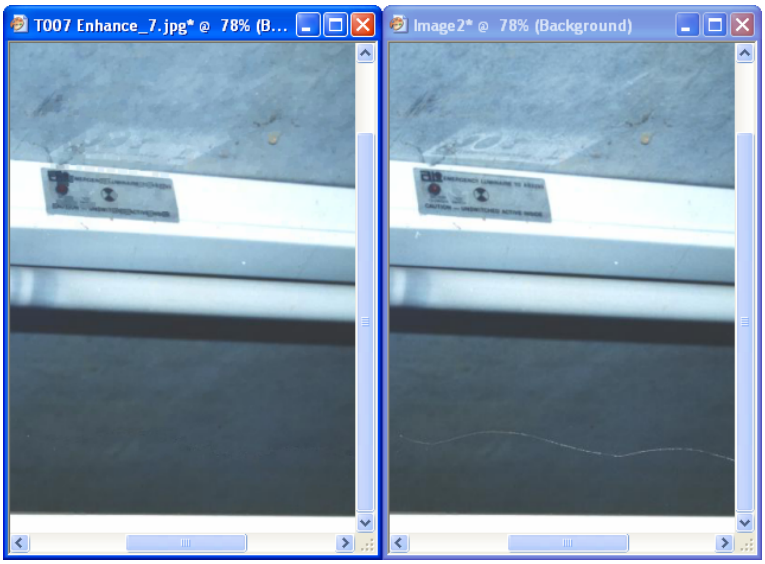
Open File *Before starting this exercise you MUST open the file T007 Enhance_7.jpg...*

1. Press Shift + D to duplicate the image, then select **Window** > **Tile Vertically** so that we will be able to compare our original image to the changed image
2. Pan both images until you can see the scratch below the light, then ensure the duplicated image is active
3. Select **Adjust** > **Add/Remove Noise** > **Automatic Small Scratch Removal** to display the ***Automatic Small Scratch Removal*** dialog box
4. Click on the ***Reset to Default*** tool
5. Untick ***Remove dark scratches*** and tick ***Remove light scratches***, then click on **[OK]**

2



5



For Your Reference…

To ***repair*** a ***scratched image***:

1. Select **Adjust** > **Add/Remove Noise** > **Automatic Small Scratch Removal**
2. Set the options as desired
3. Click on **[OK]**

Handy to Know…

- You can use the ***Scratch Remover*** tool to manually remove scratches. This tool uses the background details to create new information for replacing the scratch. To use this tool, set the width to 3 or 4 pixels wider than the scratch and then drag over the scratch.

REPAIRING DAMAGED PHOTOS

If you have old, damaged photos you can scan them and then digitally repair the scanned images. By using the ***Clone Brush*** tool, you can carefully colour in the damaged pixels after selecting the pixels surrounding the damaged pixels as the source pixels. With a bit of patience and some trial and error (remembering to use ***Undo*** as necessary) you can achieve good results.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file T003 Enhance_6.jpg...

1. Zoom the image to ***100%***, then click on the ***Clone Brush*** tool and set the tool options as ***Round*** and size ***20***

   Let's define the source pixels…

2. Right-click on the black background as shown – the beep lets you know that you have picked up the source pixels

3. Click on the large white spot immediately above where you defined the source pixels – notice that it has disappeared

4. Repeat steps ***2*** and ***3*** to define the source pixels close to the remaining damaged pixels, and then repair them

   Note that as you work on the man's hair, face and jacket, you will need to increase the magnification so that you can see more accurately the pixels that you are correcting. You will also need to change the Preset Category from the default shape to +Round 05, and the Size down to as small as 1 or 2 pixels

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For Your Reference…

To ***repair photos*** using the ***Clone Brush*** tool:

1. Increase the magnification, then click on the ***Clone Brush*** tool
2. Press Shift and click on the source pixels
3. Click on the damaged pixels to repair them

Handy to Know…

- You can also use the ***Clone Brush*** tool to duplicate an aspect in an image. Right-click on the centre of the item to be duplicated, then click and paint on the area where you want to add the item, noting that a red cross appears over the source pixels highlighting the actual pixels that you are copying.

IMPROVING COMPLEXIONS

Because we don't all have perfect skin, you can use various features to touch up the faces in your photos. The ***Edge Preserving Smooth*** feature allows you to remove noise (such blotchy complexions) without losing edge details. It does this by locating the edges of objects and then smoothing the pixels in between. You can also use this to reduce general photo graininess as well.

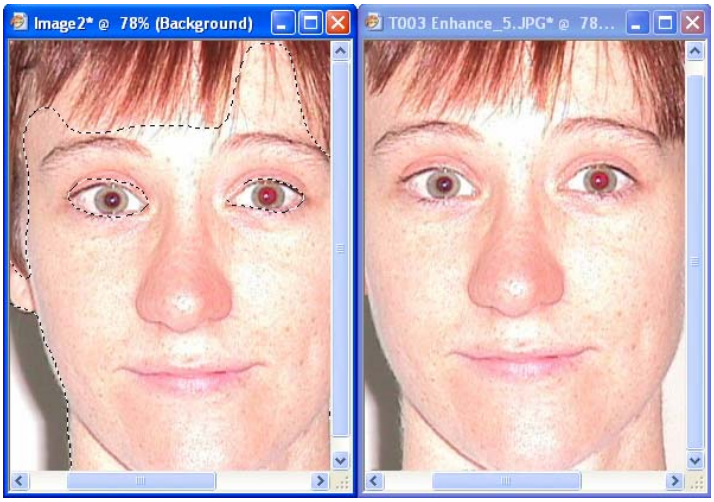
Try This Yourself:

Open File *Before starting this exercise you MUST open the file T003 Enhance_5.jpg...*

1. Use the ***Freehand Selection Tool*** to select our subject's face (but not her hair nor eyes as we don't want to change them)
2. Press Shift + D to duplicate the image, then select **Window** > **Tile Vertically** so that we can see the effects of our changes
3. Select **Adjust** > **Add/Remove Noise** > **Edge Preserving Smooth** to display the ***Edge Preserving Smooth*** dialog box, then maximise the box
4. Click on the ***Reset to Default*** tool, then click on **[OK]** – notice that her skin looks much smoother

   Now let's minimise her freckles…
5. Select **Adjust** > **Add/Remove Noise** > **Salt And Pepper Filter** to display the ***Salt And Pepper Filter*** dialog box, maximise the box, then click on the ***Reset to Default*** tool

   There are still a few freckles…
6. Increase ***Speck size*** to **7**, click on ***Include all lower speck sizes*** until it is ticked, then click on **[OK]**
7. Deselect the selection to see the result more clearly



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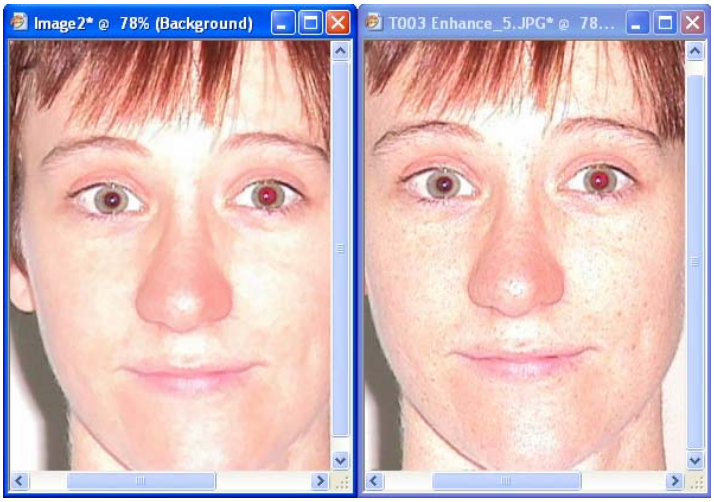


7

Tip: The Salt and Pepper filter removes multi-pixel noise by comparing an area of pixels to the surrounding pixels and then adjusting the area that is a speck to match those surrounding pixels.

For Your Reference…

To ***use*** the ***Edge Preserving Smooth Filter*** to ***remove noise***:

1. Select the area to be smoothed, then select **Adjust** > **Add/Remove Noise** > **Edge Preserving Smooth**
2. Increase the magnification, specify the ***Amount of smoothing***, then click on **[OK]**

Handy to Know…

- You can change the ***Amount of smoothing*** in the ***Edge Preserving Smooth*** dialog box. However, choose the smallest value that removes the specks while retaining the image detail.

CORRECTING LIGHTING PROBLEMS

One of the most common problems that you will experience with your digital photos is with their lighting. There will be many occasions when you will take photos in bright light and the resulting photo will show very little detail in the shadow areas. This is because your camera is attempting to not overexpose the lighter areas. You can help to reduce these problems with the ***Fill Flash*** filter.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file T003 Enhance_4.JPG.

Notice that a good deal of this photo is in shadow. Let's lighten up the foreground…

1. Use the ***Freehand Selection Tool*** to carefully select the shadowy foreground
2. Select **Adjust** > **Photo Fix** > **Fill Flash** to display the ***Fill Flash Filter*** dialog box
3. Click on the ***Reset to Default*** tool then maximise the dialog box and pan to the cars in the shadow area until you can see the white van

   Notice that the default value has lightened the shadow area, but let's increase it a little bit more…
4. Click on until ***45*** is displayed in ***Strength*** – now that looks a bit better
5. Click on **[OK]** – you can see more detail in the foreground now but its lighting still looks natural
6. Select **Selections** > **Select None** to deselect the foreground

1

6

Tip: If the entire photo was too dark, you would simply display the Fill Flash Filter dialog box without first making a selection. This would then lighten the entire image.

For Your Reference…

To ***activate*** the ***Fill Flash Filter***:

1. Select **Adjust** > **Photo Fix** > **Fill Flash**
2. Adjust the ***Strength***
3. Click on **[OK]**

Handy to Know…

- Another common problem occurs when you photograph a person in a bright window. To overcome this, use the ***Fill Flash Filter*** to brighten their face (and the background) and then use the ***Backlighting Filter*** (**Adjust** > **Photo Fix** > **Backlighting**) to reduce the brightness of the window.

CORRECTING SMALL COLOUR ABNORMALITIES

Chromatic aberration occurs when incorrectly-coloured pixels are placed in an image. For example, you may notice this problem along the edges of backlit objects as seen with the green pixels outlining some of the people in our image below, in photos of sun reflections on water, or in night photos such as fireworks.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file T003 Enhance_3.JPG...

1. Increase the ***zoom*** to ***120%***, then pan down and look at the people on both the left and right sides of the image

   Notice that they have green pixels along their sides that are closest to the sun…

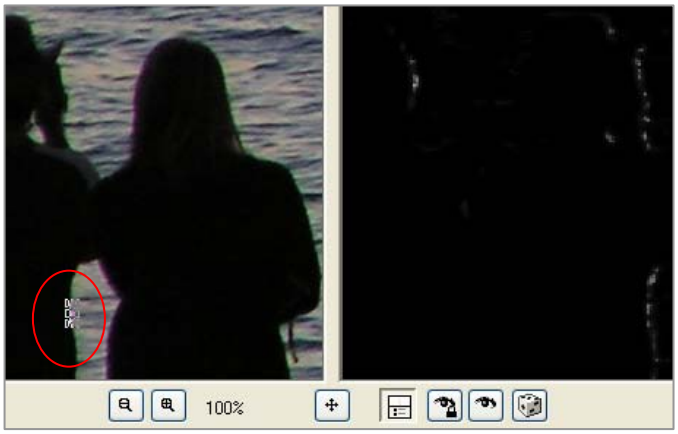
2. Select **Adjust** > **Photo Fix** > **Chromatic Aberration** to display the ***Chromatic Aberration Correction*** dialog box, then maximise the box

3. Click on the ***Reset to Default*** tool, click on the ***Navigate*** tool then drag down and to the left to display the heads of the three left-most people, then click on ***Show Differences*** until it is ticked – the preview pane will blacken

4. Hover over some of the green pixels in the left pane and click and drag down to carefully select several green pixels – notice that the preview pane will update to show several white places indicating where the image will be repaired

5. Repeat step ***4*** to select up to ten samples, then click on **[OK]** to correct the coloured pixels

   You may find that you need to repeat this procedure



4

Tip: When Show Differences is ticked, the preview pane will highlight the pixels that will be corrected with this filter – the whiter the pixels, the greater the correction.

You can create up to 10 sample ranges. If you find that one sample is too similar to one that you have already defined, you can click on the sample that you don't require and then click on [Remove].

After you have defined the samples and then clicked on [OK] to make the changes, always pan around the image to see if you have corrected the desired number of incorrect pixels. If there are still incorrect pixels, repeat the procedure and define new samples from the affected areas.

For Your Reference…

To ***correct chromatic aberration problems***:

1. Select **Adjust** > **Photo Fix** > **Chromatic Aberration**
2. Click on ***Show Differences***
3. Select samples of the incorrectly-coloured pixels, then click on **[OK]**

Handy to Know…

- These colour abnormalities can be caused by several things, including the camera when it is estimating the exposure setting to use, or it can be a problem with the camera lens – particularly with telephoto and zoom lenses.

REDUCING PHOTO GRAININESS

Graininess or ***digital noise*** refers to the tiny, non-uniform black, white or coloured specks that appear on some images. These unwanted specks can appear for many reasons, for example, during the JPEG file compression, or simply from the digital camera. They can appear as smaller specks or as an all-over noise which tends to make images look grainy.

Try This Yourself:

Before starting this exercise you MUST open the file T003 Enhance_2.JPG...

1. Click on the ***Zoom In*** tool until the image is displayed at ***300%***, pan to the top left corner of the image – notice that the blue sky appears quite 'grainy'. A clear blue sky is not generally speckled

   Let's remove the noise from the entire photo…

2. Select **Adjust** > **Photo Fix** > **Digital Camera Noise Removal** to display the ***Digital camera noise removal*** dialog box

3. Click on the ***Maximise*** button to maximise the dialog box, click on the ***Zoom In*** tool until the image is displayed at ***300%***, then click on the ***Navigate*** tool to display a navigation window

4. While holding down the mouse button move the orange square into the sky in the navigation window

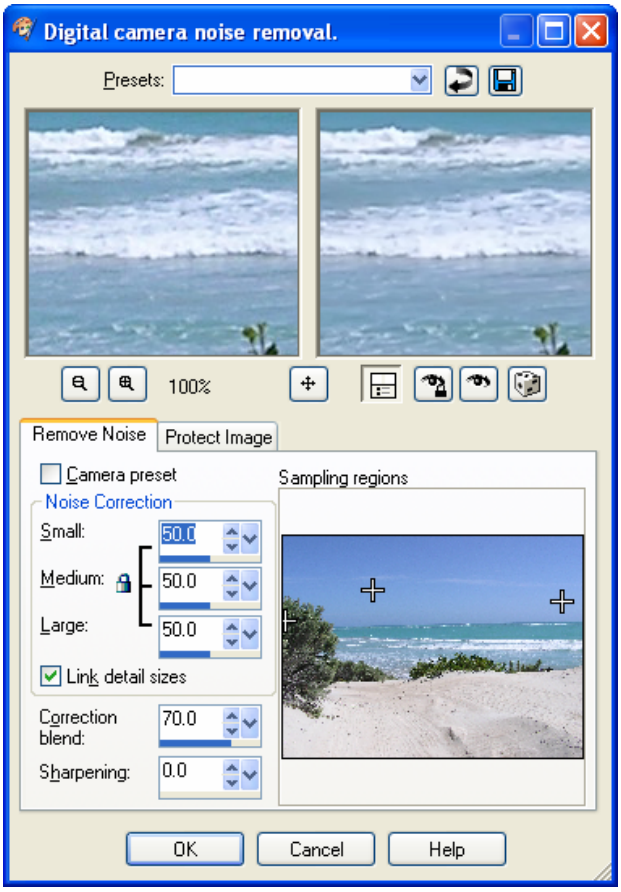
   Notice that the preview pane at the top right of the dialog box looks less grainy…

5. Click on **[OK]**

   The noise removal process will take a minute or so and then you will see that the image is much less grainy…

6. Zoom back out to ***30%*** to see the result

2



3

For Your Reference…

To ***remove digital noise***:

1. Select **Adjust** > **Photo Fix** > **Digital Camera Noise Removal**
2. Make any adjustments or leave the default
3. Click on **[OK]**

Handy to Know…

- If you have an image that includes both smooth and textured areas (such as a gravel road), you can select **Adjust** > **Add/Remove Noise** > **Texture Preserving Smooth** to remove the noise from the smooth areas and remove less noise from the textured areas.

IMPROVING COLOURS, CONTRAST & SATURATION

The first step for improving a colour photo is to improve its ***colour*** (unless it is very dark or light and then you would alter the contrast before the colour, and then its contrast again if necessary).

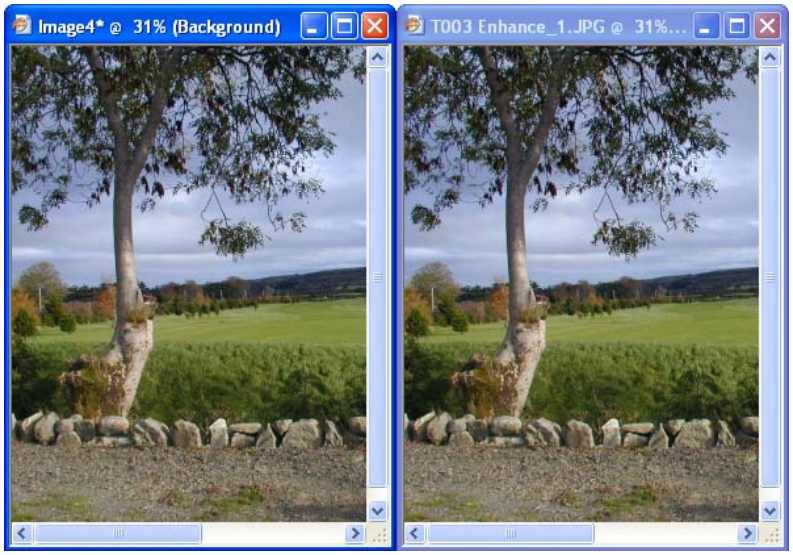
Once the colours look natural, you can then adjust the ***contrast*** and the ***saturation***. Although you can make adjustments with the automatic adjustment features, we will simply use the default settings.

Try This Yourself:

Open File *Before starting this exercise you MUST open the file T003 Enhance_1.JPG...*

1. Press Shift + D to duplicate the image, then select **Window > Tile Vertically** so that we will be able to compare our original image to the changed image
2. Ensure that the duplicate image is active, then select **Adjust > Automatic Colour Balance** to display the ***Automatic Colour Balance*** dialog box
3. Click on the ***Reset to Default*** tool then click on **[OK]**
4. Select **Adjust > Automatic Contrast Enhancement** to display the ***Automatic Contrast Enhancement*** dialog box
5. Click on the ***Reset to Default*** tool then click on **[OK]**
6. Select **Adjust > Automatic Saturation Enhancement** to display the ***Automatic Saturation Enhancement*** dialog box
7. Click on the ***Reset to Default*** tool then click on **[OK]**

   Now this picture, which was already well balanced, looks even better



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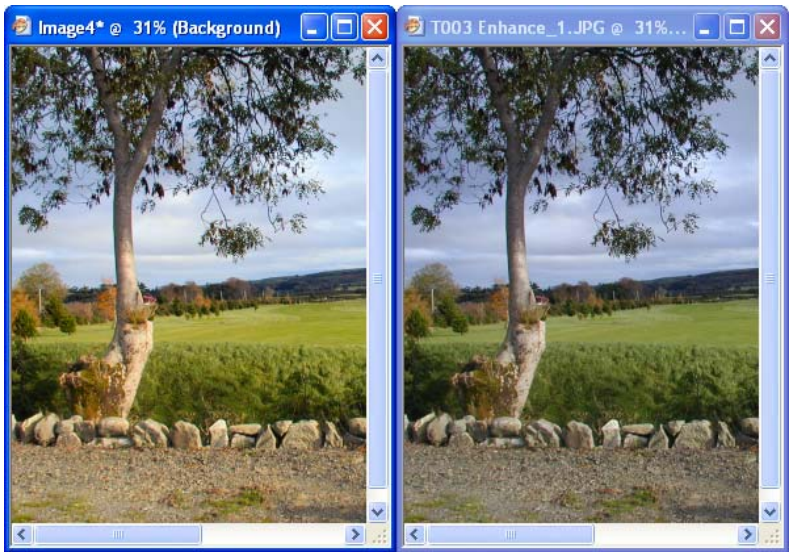

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For Your Reference…

To ***automatically adjust*** the ***colour***, ***contrast*** and ***saturation***:

1. Press Shift + D to duplicate the image
2. Select **Adjust > Automatic Colour Balance / Automatic Contrast Enhancement / Automatic Saturation Enhancement**

Handy to Know…

- The ***Automatic Colour Balance***, ***Automatic Contrast Enhancement*** and ***Automatic Saturation Enhancement*** features only work on images with a colour depth of 16 million colour.
- With black and white photos you can adjust only their contrast as they have no colour.

ABOUT ENHANCING PHOTOS

As you work more with digital photos, you will come to recognise common problems that can occur. You can fix these using Paint Shop Pro; however, there is a specific order in which you should correct the various problems. It is important to follow the order mentioned below as some later functions will remove image data that is needed to correctly complete the earlier steps.

Photo Enhancement Checklist

1. Improve ***colours***, ***contrast*** and ***saturation*** (and usually in this order). Where:
   - ***colour –*** refers to the colours in the photo. You can adjust the colour balance to ensure that all colours in the photo look natural.
   - ***contrast*** – looks firstly at the brightness of the colour tones in the photo (that is, whether they are too bright or too dull), and secondly, looks at the contrast between all colour tones in the photo (that is, looks at the difference between the lightest and the darkest tones in the picture).

     If you let Paint Shop Pro adjust the contrast automatically, you will achieve a better result if you adjust the entire photo (rather than adjusting only a selection) as Paint Shop Pro can compare all colour tones in the photo rather than a selection of tones.

     Just as a note, most photos seem to benefit from one or two points of additional contrast and a little extra brightness. It often makes the image seem sharper.
   - ***saturation*** – looks at the vividness of the various colours in the photo, for example, bright orange is a highly saturated colour. As you reduce the saturation, the colour drains away leaving, eventually, only the greyscale component.

   You can opt to modify each of the above manually (but always remember to do it on a copy of the original photo!) or you can use the Paint Shop Pro automatic adjustment features: ***Automatic Colour Balance***, ***Automatic Contrast Enhancement*** and ***Automatic Saturation Enhancement***.
2. Remove digital ***noise*** with Paint Shop Pro's ***Digital Camera Noise Removal*** filter. This filter identifies and removes any tiny, non-uniform specks from either the entire image or from a selection.
3. Remove ***colour abnormalities*** using the ***Chromatic Aberration Removal*** filter. This filter identifies and removes or reduces problem areas of images where incorrect colours have been placed.
4. Correct flash problems where the camera has applied either too much flash (the photo looks overexposed) or too little flash (the subjects in the photo are very dark). You can correct these problems using either the ***Backlighting*** filter or the ***Fill Flash*** filter.
5. Correct image defects, such as single-pixel or multiple-pixel black or white specs, and other small areas of noise, using the various options on the **Add/Remove Noise** submenu.
6. Retouch photos, including removing scratches using the ***Automatic Small Scratch Removal*** function, removing unwanted highlights and objects from your photos, and blurring images.
7. Sharpen images using the ***Clarify*** function. Just as a note, try not to overdo the sharpening of an image as it can tend to make the image appear jagged. (This effect is particularly noticeable on diagonal lines.)
8. Remove red eyes from photos using the ***Red Eye Removal*** function.

*Tip: If you haven't got time to work through each of the various steps as highlighted above, you can always opt for Paint Shop Pro's **One Step Photo Fix** function. This feature automatically adjusts the colour balance, contrast, clarity, and saturation; smoothes the edges; and sharpens the image.*

*To do this, select **Adjust** > **One Step Photo Fix**.*

RETOUCHING A PHOTO

In this exercise, you will use several of the image enhancing methods, along with some of the selection techniques and tools that we have covered so far, to retouch a photo. The photo comprises an out-of-focused dog on a busy rug. He's a great-looking dog so let's look at some of the things that we can do so that he is clearer and more visible in the photo.

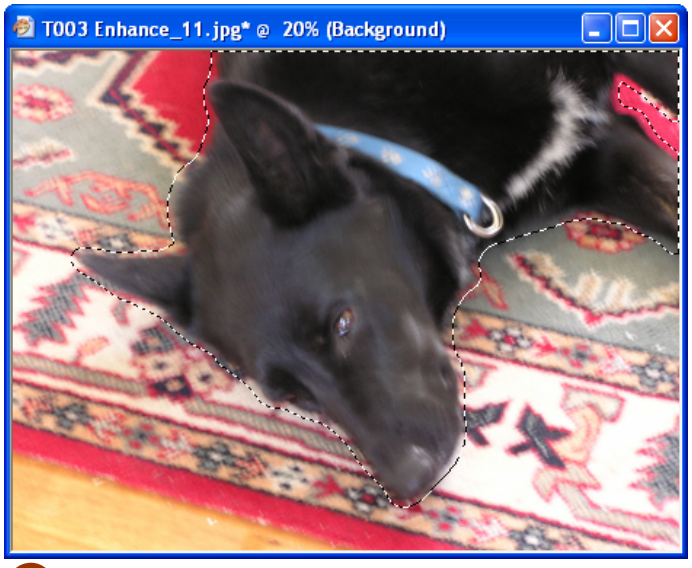
Try This Yourself:

Open File

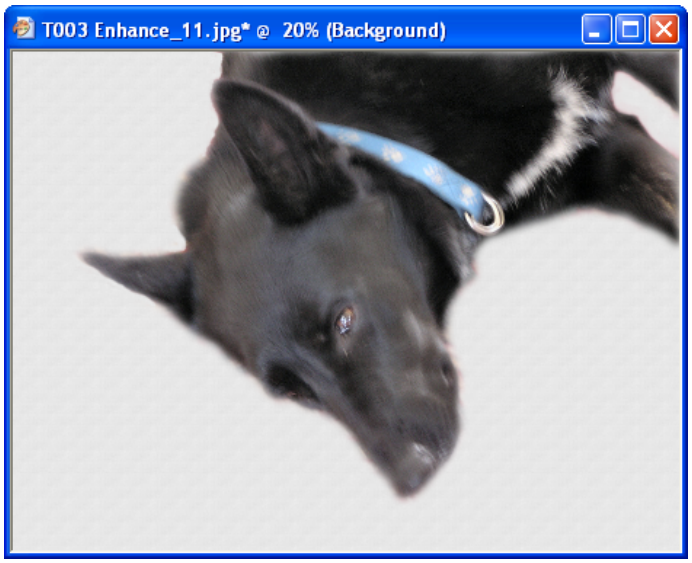
Before starting this exercise you MUST open the file T003 Enhance_11.jpg...

1. Click on the ***Freehand Selection*** tool and set its options as ***Edge Seeker***, ***Feather*** – ***20***, ***Range*** – ***15***, and ***Smoothing*** – ***30***
2. Starting from one point on the dog, carefully click along the edge of the dog – you will need to click many times – then double-click on the starting point to close the selection

   After a few moments the selection marquee will appear…
3. Automatically adjust the ***colour balance***, ***contrast*** and ***saturation*** using the default settings
4. ***Clarify*** the selection using the default settings, then ***sharpen*** and ***sharpen more*** (twice) the selection
5. Select **Edit** > **Copy**, open ***T009 Enhance_12.jpg***, select **Edit** > **Paste** > **Paste As New Selection**, move the dog into its original position, click to anchor the selection, then select **Selections** > **Select None**
6. If you have any red pixels around the edge of the dog, increase the magnification, click on the ***Clone Brush*** tool (set ***Opacity*** to ***50%***), right-click on the background near the red pixels, then left-click and drag carefully to replace the red pixels



2



6

For Your Reference…

Retouching a ***photo*** may include:

- Adjusting the colour balance, contrast and saturation
- Deleting or cropping unwanted pixels
- Clarifying and sharpening the image
- Using the clone brush to replace unwanted pixels

Handy to Know…

- In this exercise, the image that we pasted the dog onto had been flood filled with a simple textured pattern. For more information on pattern and other types of fills, see the ***Creative Fills*** chapter.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